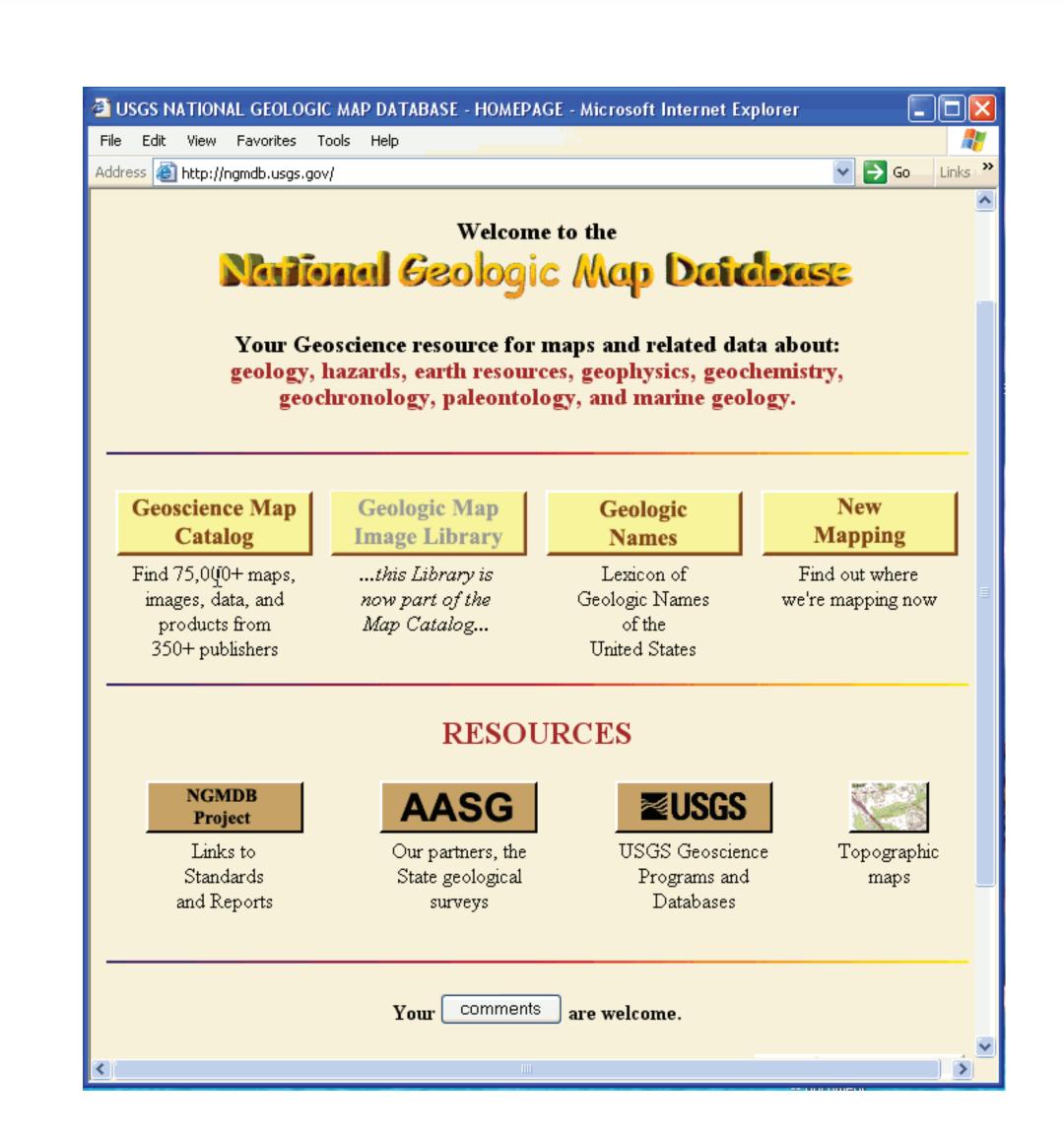




THE U.S. NATIONAL GEOLOGIC MAP DATABASE PROJECT

ngmdb.usgs.gov



The NGMDB has become a positive force in the U.S. geoscience community, bringing together a diverse group of geological surveys. From this shared pursuit, perhaps the most valuable aspect of the NGMDB effort has emerged – the opportunity to work together toward the common goal of providing high quality science to the public.

The National Geologic Mapping Act mandates the state geological surveys and the USGS to establish a National Geologic Map Database (NGMDB), as a national archive of geologic maps that have standardized format, symbols, and technical attributes.

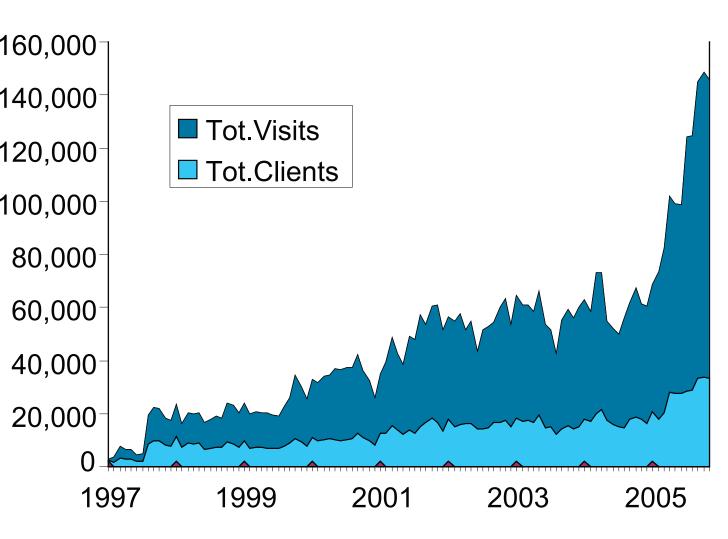
PHASE 1 build the map catalog, and related databases. PHASE 2 develop standards for maps and databases. PHASE 3 build an online database of digital geologic map information.

Because of the Mapping Act's broad scope, we use a phased, incremental approach to design the NGMDB. This approach gives us time to build consensus and expertise among the Database designers in the state geological surveys and the USGS. For 10 years, we have worked to provide:

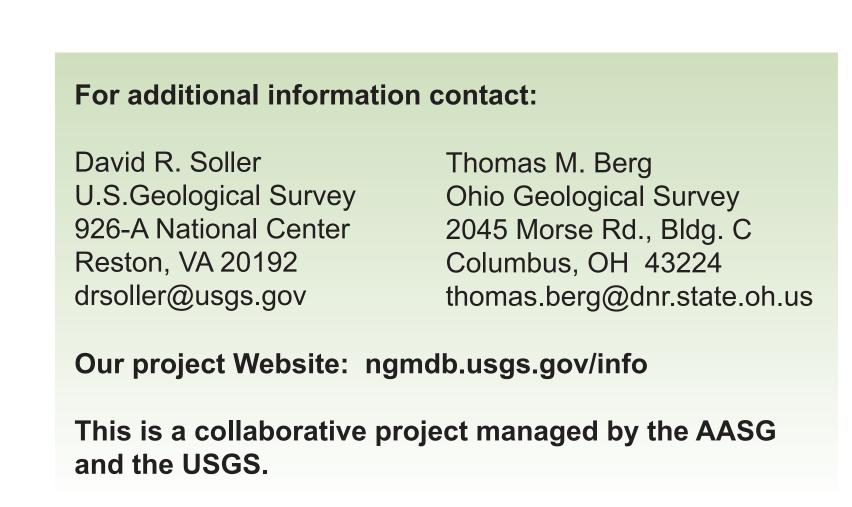
- A stable set of databases and resources on stratigraphic nomenclature and availability of published geoscience information ("Phase 1");

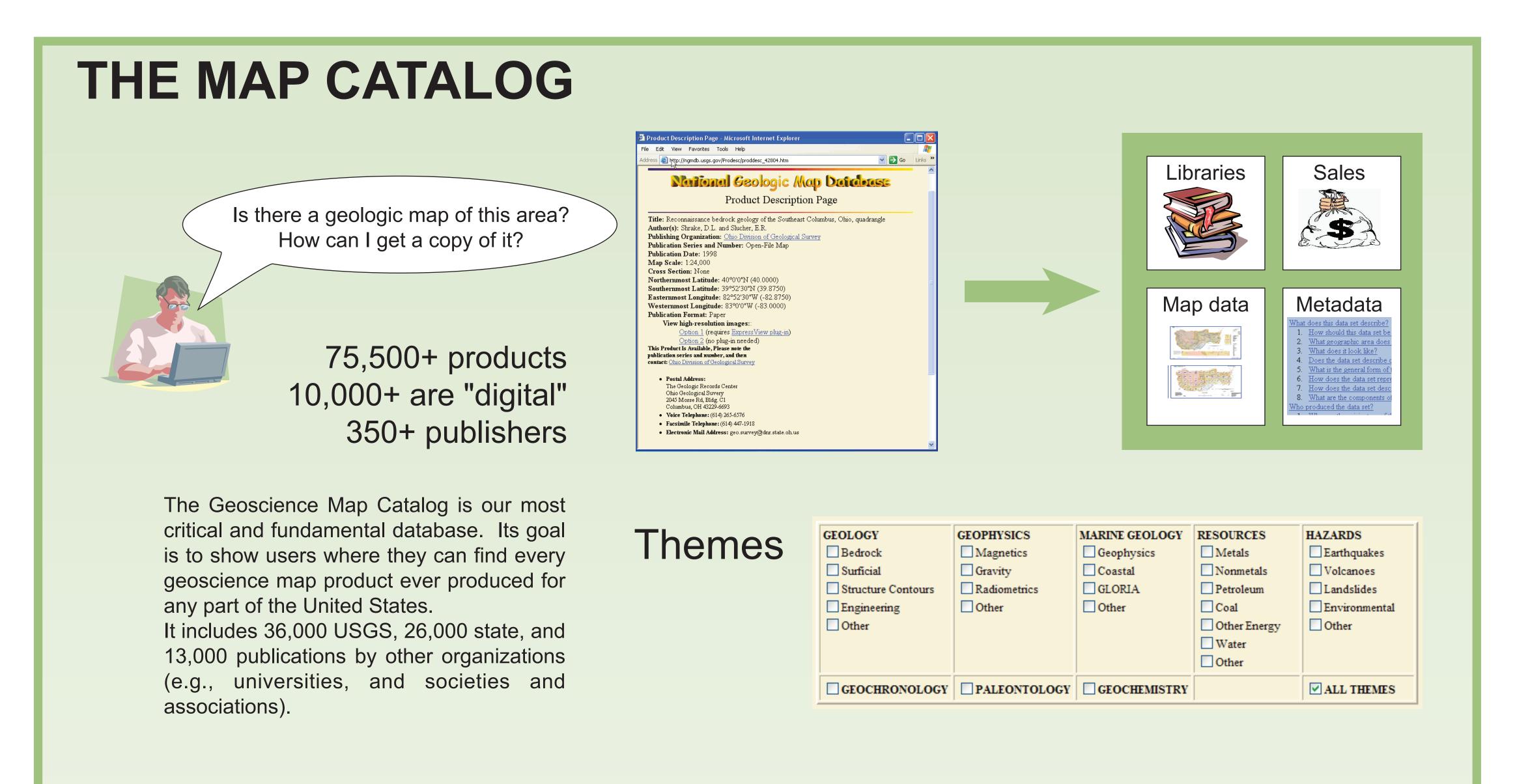
- A widely-accepted venue for standards and technical development, and for resources and guidance for colleagues and agencies ("Phase 2"), in order to design and build a national, distributed online database of geologic map information ("Phase 3");

- A responsive public-service capability. About 35,000 users visit the NGMDB site each month, and many of them ask questions or have comments. Whenever needed, we refer them directly to the state geological surveys. Because the Act stipulates that the NGMDB exists to serve the public, this activity is a high priority, and provides us with invaluable feedback.



The NGMDB is successful because it provides comprehensive geoscience information for the nation. It's not a "stovepipe system," but instead ties together the resources of all our geological surveys.





Finding digital products

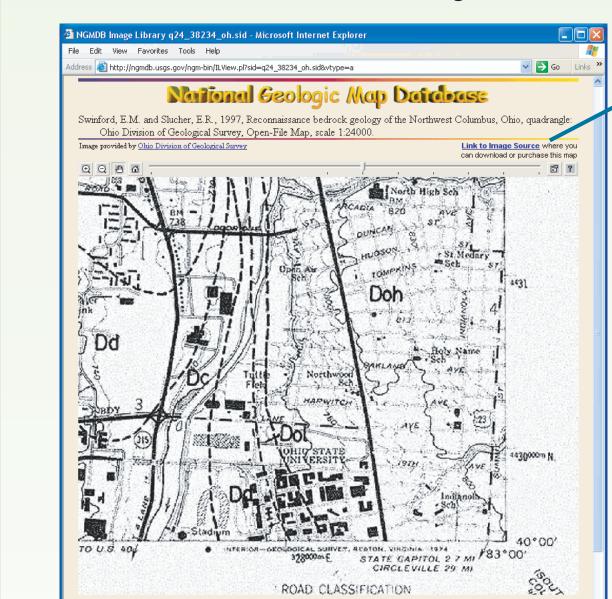
Maps in NGMDB libraryOnline maps and reportsIncludes GIS data

Includes GIS data

Maps and reports not online

We've upgraded the Catalog to let you search for these different kinds of digital products. The "NGMDB Library" is our prototype Image Library -- it's now part of the Map Catalog so that users can more easily find and view high-resolution map images. We are now working on a Map Catalog search interface that lets users locate their area of interest on a base map, and then find the available publications.

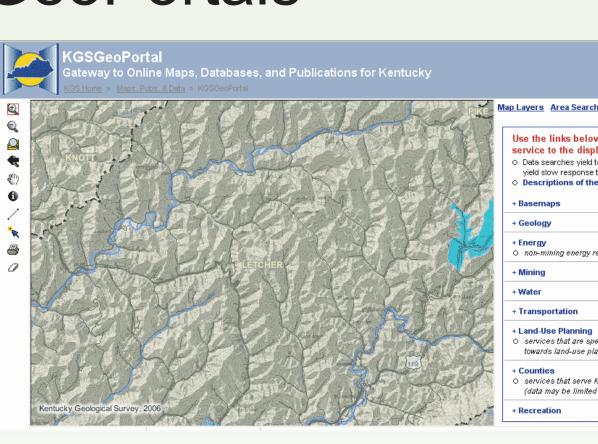
NGMDB library



OHIO DEPARTMENT OF NATURAL RESOURCES Vision of Geological Survey HOW TO OBTAIN PUBLICATIONS

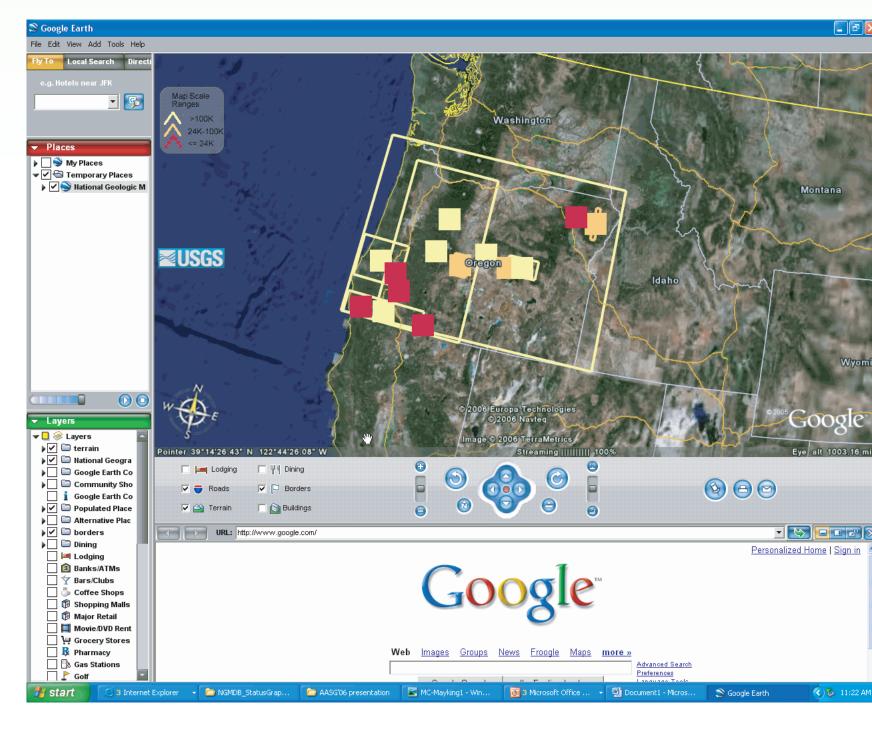
For maps in the NGMDB Library, you can view the MrSID image, and either download the file or link to the publishing agency to obtain the map.

GeoPortals

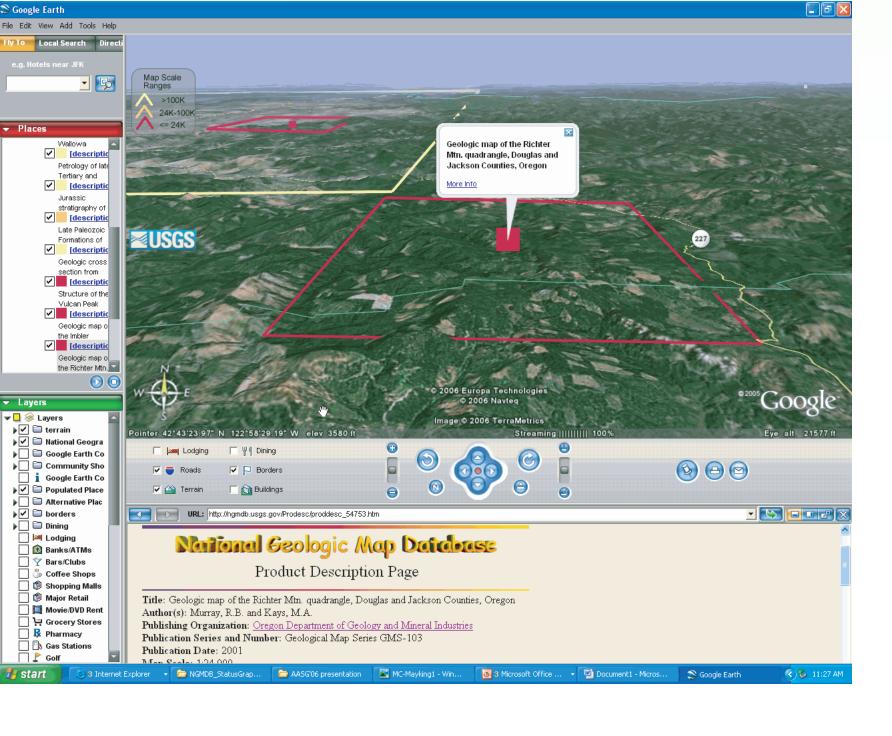


From our Product Description Page for each Kentucky GS map, we provide a link to the KGS GeoPortal -- we send the map coordinates directly to their ArcIMS server, providing you with direct access to the wide variety of technical and basemap data available for that area. If you have a similar portal, we'd like to work with you!

Search for maps using Google Earth



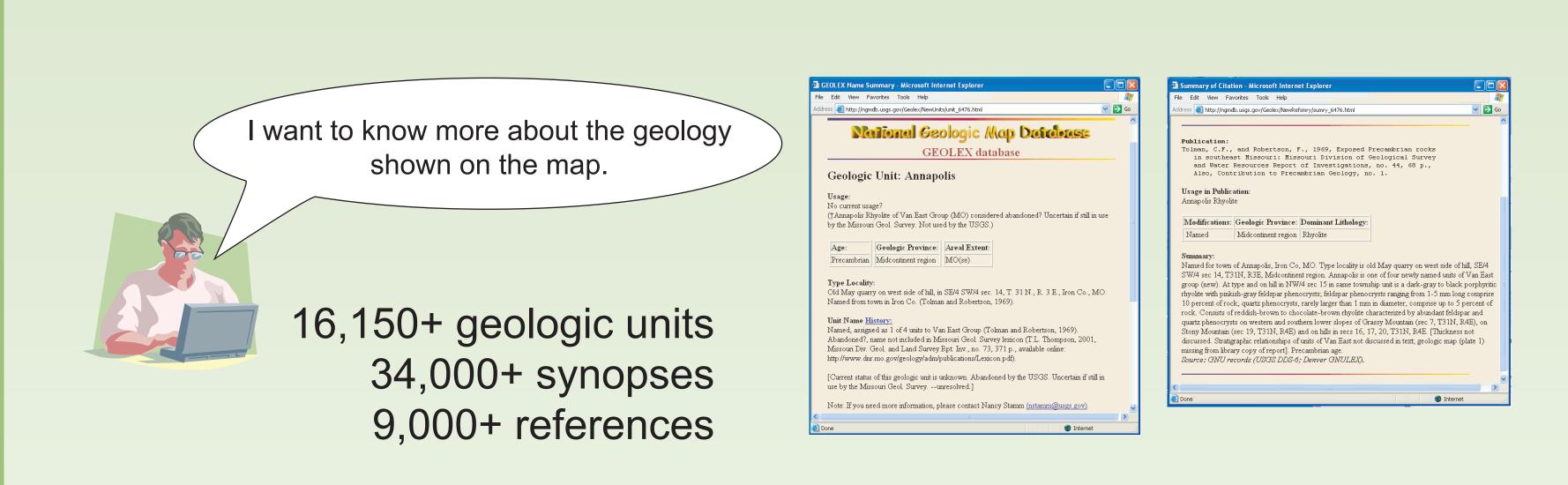
When you search the Map Catalog, we provide a list of products -- it's useful, but not "visual." Therefore, we are working with Portland State University's Geology Department to create a listing of maps that are viewable in Google Earth. Here are the outlines and "push pins" for bedrock and surficial geologic maps in Oregon.



When you click on a push pin, the NGMDB Product Description Page is displayed below the map; that Page provides links to the publisher, viewable images, and downloadable data.

For information about this prototype, see Dave Soller (USGS) or David Percy (Portland State University).

THE GEOLOGIC NAMES LEXICON

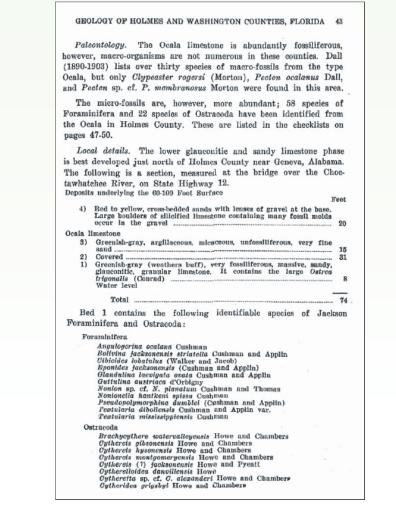


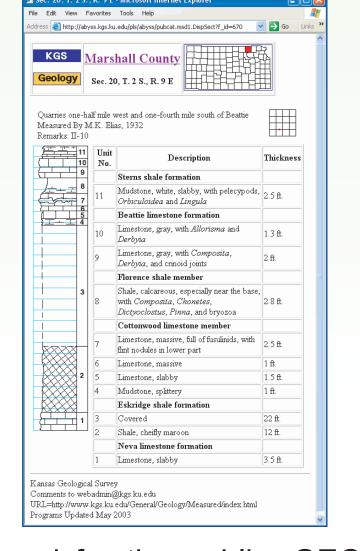
Correlation of geologic units between map areas, and across state boundaries, is essential to th geological sciences, to our users, and to the National Geologic Map Database.

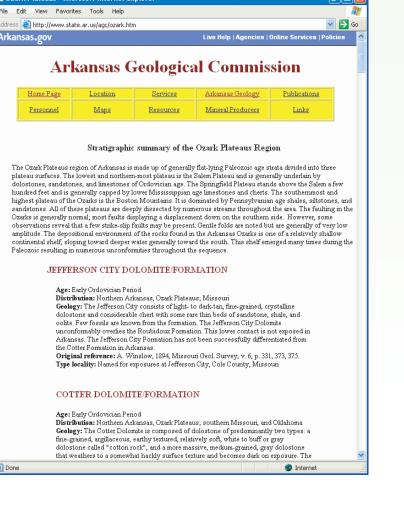
The NGMDB manages the U.S. Geologic Names Lexicon ("GEOLEX"), which is intended to be the authoritative, standard reference for all geologic names that are (or were) used in the U.S. It is designed to serve the needs of local and regional geologic mappers in the state geological surveys, the USGS, universities, and elsewhere.

A U.S. Geologic Names Committee was formed earlier this year; in part, its purpose is to help coordinate the usage of geologic names among our agencies and facilitate the resolution of stratigraphic nomenclature issues.

Linking to state resources







Octavious Processing Process (Controllers Supposed Figure 1980) (Controllers Optionates) (Figure 1980) (Figure 198

starting point. From these summaries, we plan to link to the detailed scientific resources maintained by the state geological surveys, universities, and associations. For example, users could find online:

- the publications cited in GEOLEX (especially those that are out-of-print)

- the publications cited in GEOLEX (especially those that are out-of-print),
- neasured sections, and
- state geological survey-endorsed stratigraphic lexicons.

We think it's a great plan, but we need a little help finding these on your websites.

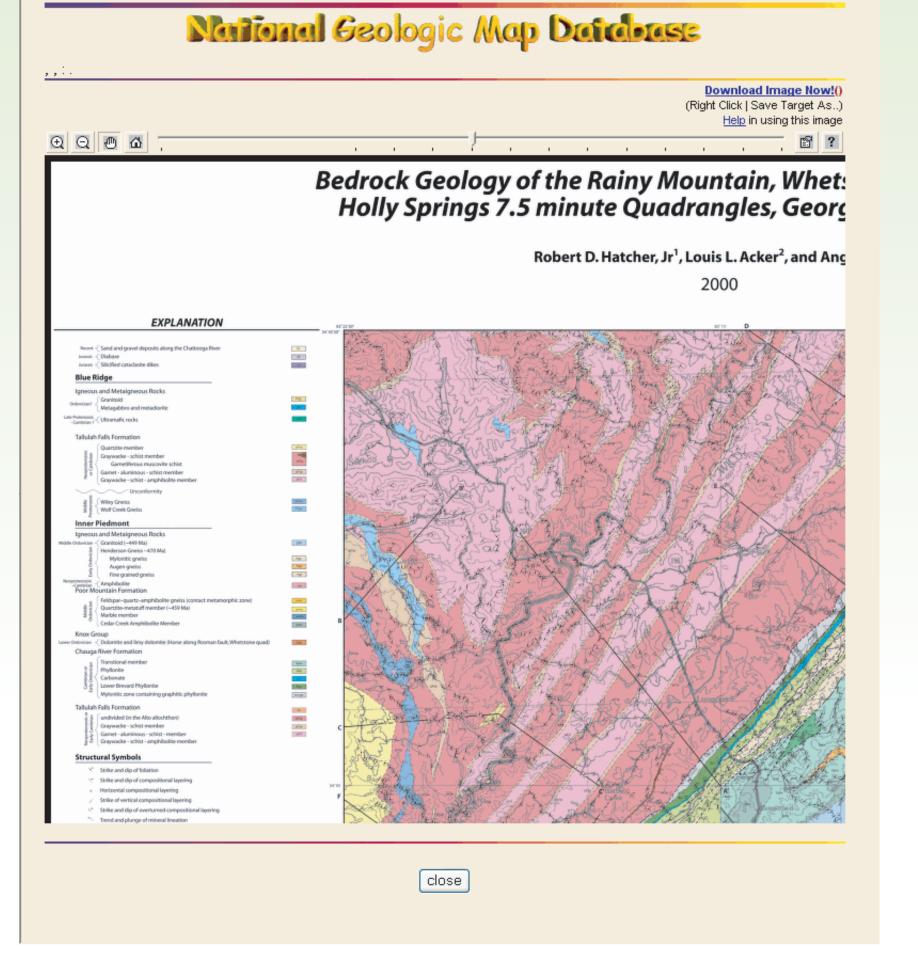
Preserving unpublished information

A geologic map is a summary of many unpublished observations, data, and interpretations. In some unfortunate cases, even the map is not published.

The NGMDB strives to support USGS and AASG interests in preserving this information, by working on several efforts:

1) designing a national database structure to accommodate unpublished information (especially for borehole samples and outcrop observations);
2) populating our prototype paleontology database with unpublished reports and

analyses; and
3) designing a mechanism for archiving unpublished maps and GIS files produced by EDMAP projects (and, potentially, others), and for providing access to them through the Map Catalog as shown here in a prototype webpage for an unpublished EDMAP contract deliverable.



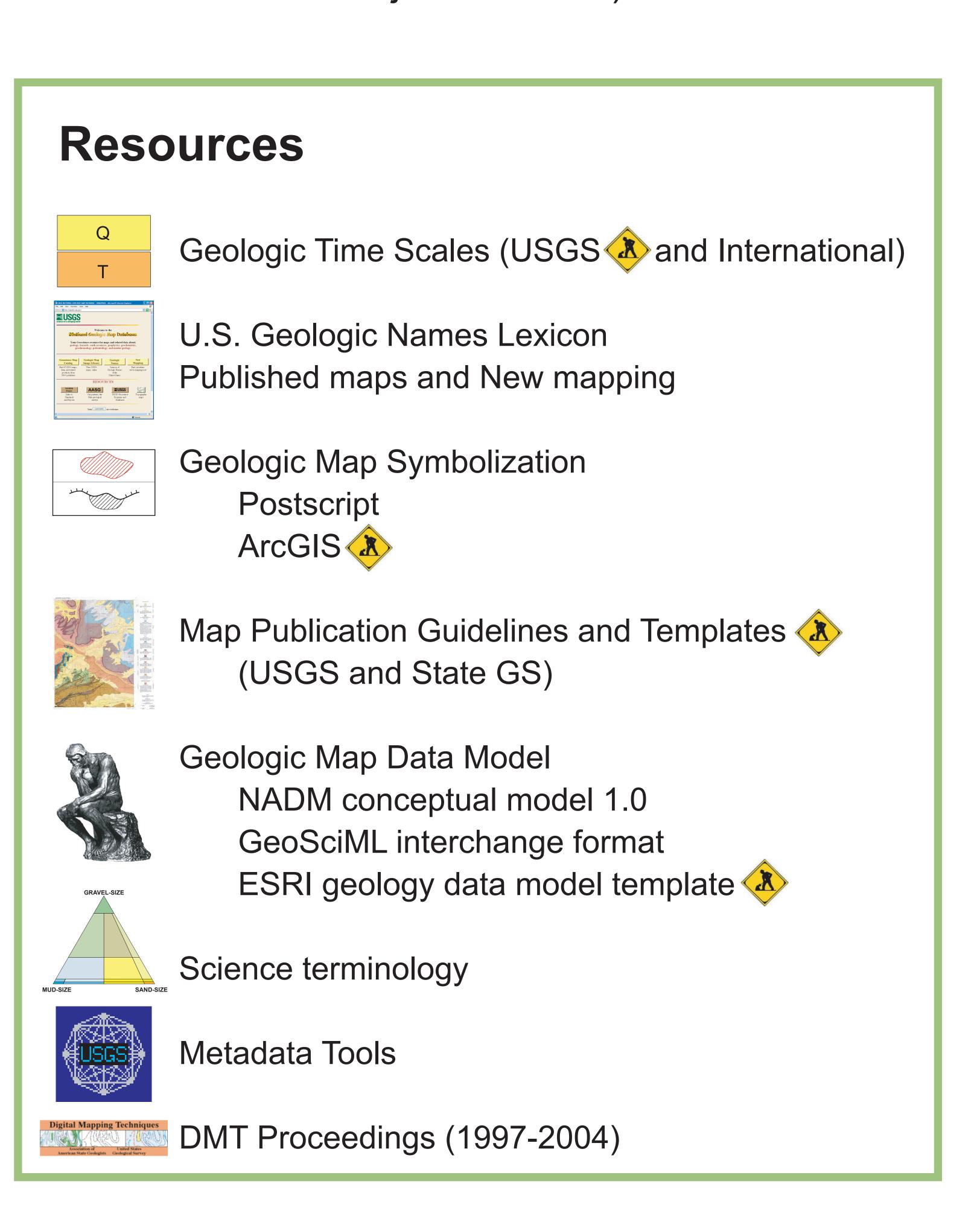
"...the maps are designed not so much for the specialist as for the people, who justly look to the official geologist for a classification, nomenclature, and system of convention so simple and expressive as to render his work immediately [understandable]..."

--John Wesley Powell, 1888.

SUPPORT FOR GEOLOGIC MAPPING

ngmdb.usgs.gov/info

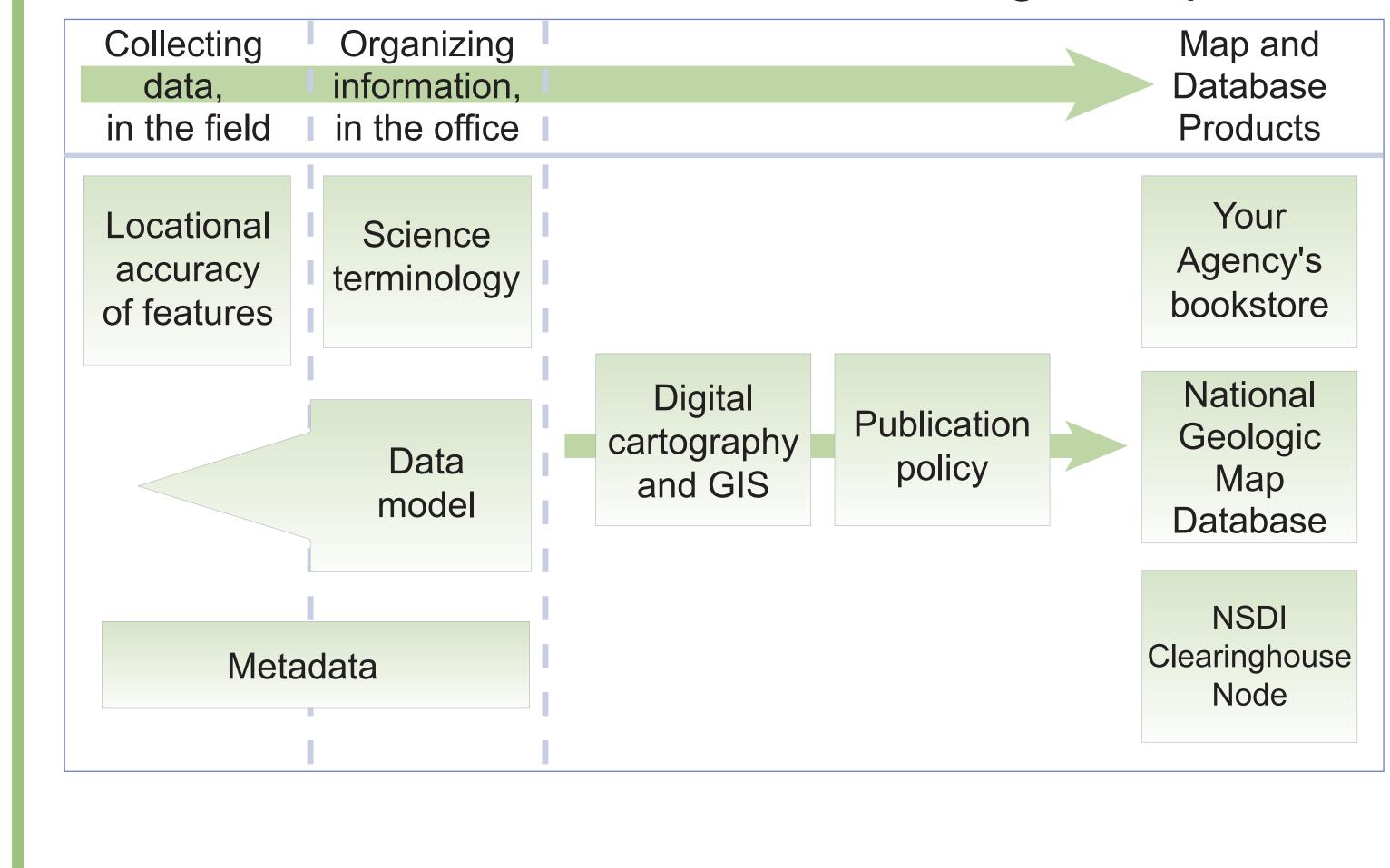
(Resources, DMT Proceedings, Project activities)



Standards

Working with Canadian and other U.S. agencies, the USGS and AASG are developing a North American data model and science terminology, and locational accuracy and map symbol standards.

How these standards relate to making a map



The data model is an organizational tool

